



STATE OF MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI

GOVERNOR

DAVID P. LITTELL

COMMISSIONER

Windham School District  
Attn: Donn Davis, Assistant Superintendent  
228 Windham Center Road  
Windham, Maine 04062

March 10, 2006

RE: Maine Pollutant Discharge Elimination System (MEPDES) # ME0102751  
Maine Waste Discharge License (WDL) Application # W002510-5D-C-R  
**Final Permit/License**

Dear Mr. Davis:

Enclosed please find a copy of your **final** MEDPES permit/Maine WDL which was approved by the Department of Environmental Protection. Please read the permit and its attached conditions carefully. You must follow the conditions in the order to satisfy the requirements of law. Any discharge not receiving adequate treatment is in violation of State Law and is subject to enforcement action.

Any interested person aggrieved by a Department determination made pursuant to applicable regulations, may appeal the decision following the procedures described in the attached DEP FACT SHEET entitled "*Appealing a Commissioner's Licensing Decision.*"

We would like to make you aware of the fact that your monthly Discharge Monitoring Reports (DMR) may not reflect the revisions in this licensing action for several months however, you are required to report applicable test results for parameters required by this licensing action that do not appear on the DMR. Please see the attached April 2003 O&M Newsletter article regarding this matter.

If you have any questions regarding this matter, please feel free to call me at 287-7658.

Sincerely,

David Silver  
Division of Water Resource Regulation  
Bureau of Land and Water Quality

Enc.

cc: Stuart Rose, DEP/SMRO;

[REDACTED],  
Steve Woodard, Woodard & Curran, 41 Hutchins Dr, Portland ME 04102

Brian Kinney, Windham School

WDS:W002510

AUGUSTA

17 STATE HOUSE STATION  
AUGUSTA, MAINE 04333-0017  
(207) 287-7688 FAX: (207) 287-7826  
RAY BLDG., HOSPITAL ST.

BANGOR

106 HOGAN ROAD  
BANGOR, MAINE 04401  
(207) 941-4570 FAX: (207) 941-4584

PORTLAND

312 CANCO ROAD  
PORTLAND, MAINE 04103  
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE

1235 CENTRAL DRIVE, SKYWAY PARK  
PRESQUE ISLE, MAINE 04769-2094  
(207) 764-0477 FAX: (207) 760-3143

## **DMR Lag**

**(reprinted from April 2003 O&M Newsletter)**

When the Department renews discharge permits, the parameter limits may change or parameters may be added or deleted. In some cases, it is merely the replacement of the federally issued NPDES permit with a state-issued MEPDES permit that results in different limits. When the new permit is finalized, a copy of the permit is passed to our data entry staff for coding into EPA's Permits Compliance System (PCS) database. PCS was developed in the 1970's and is not user-friendly. Entering or changing parameters can take weeks or even months. This can create a lag between the time your new permit becomes effective and the new permit limits appearing on your DMRs. If you are faced with this, it can create three different situations that have to be dealt with in different ways.

1. If the parameter was included on previous DMRs, but only the limit was changed, there will be a space for the data. Please go ahead and enter it. When the changes are made to PCS, the program will have the data and compare it to the new limit.
2. When a parameter is eliminated from monitoring in your new permit, but there is a delay in changing the DMR, you will have a space on the DMR that needs to be filled. For a parameter that has been eliminated, please enter the space on the DMR for that parameter only with "NODI-9" (No Discharge Indicator Code #9). This code means monitoring is conditional or not required this monitoring period.
3. When your new permit includes parameters for which monitoring was not previously required, and coding has not caught up on the DMRs, there will not be any space on the DMR identified for those parameters. In that case, please fill out an extra sheet of paper with the facility name and permit number, along with all of the information normally required for each parameter (parameter code, data, frequency of analysis, sample type, and number of exceedances). Each data point should be identified as monthly average, weekly average, daily max, etc. and the units of measurement such as mg/L or lb/day. Staple the extra sheet to the DMR so that the extra data stays with the DMR form. Our data entry staff cannot enter the data for the new parameters until the PCS coding catches up. When the PCS coding does catch up, our data entry staff will have the data right at hand to do the entry without having to take the extra time to seek it from your inspector or from you.

EPA is planning significant improvements for the PCS system that will be implemented in the next few years. These improvements should allow us to issue modified permits and DMRs concurrently. Until then we appreciate your assistance and patience in this effort.



STATE OF MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
STATE HOUSE STATION 17      AUGUSTA, MAINE 04333

DEPARTMENT ORDER

IN THE MATTER OF

WINDHAM SCHOOL DISTRICT	)	MAINE POLLUTANT DISCHARGE
WINDHAM, CUMBERLAND COUNTY, MAINE	)	ELIMINATION SYSTEM PERMIT
OVERBOARD DISCHARGE	)	AND
ME0102751	)	WASTE DISCHARGE LICENSE
W002510-5D-C-R APPROVAL	)	RENEWAL

Pursuant to the provisions of the Federal Water Pollution Control Act, Title 33 USC, Section 1251, et. seq. and Maine Law 38 M.R.S.A., Section 414-A et seq., and applicable regulations, the Department of Environmental Protection (Department hereinafter) has considered the application of the WINDHAM SCHOOL DISTRICT (SCHOOL, hereinafter), with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

**APPLICATION SUMMARY**

The applicant has applied for a renewal of Waste Discharge License (WDL) #W002510-ZC-B-R, which was issued on August 14, 1995 and expired on August 14, 2005. The WDL approved the discharge of up to a monthly average flow of 15,000 (0.015 million) gallons per day of secondary treated waste water from a school waste water treatment facility, to the Pleasant River, Class B, in Windham, Maine. The applicant requests an increase of the monthly average flow limit to 25,000 GPD.

On January 12, 2001, the Department received authorization from the U.S. Environmental Protection Agency (EPA) to administer the National Pollutant Discharge Elimination System (NPDES) permit program in Maine. From that point forward, the program has been referred to as the Maine Pollutant Discharge Elimination System (MEPDES) permit program and permit #ME0102751 will be utilized as the primary reference number.

**PERMIT SUMMARY**

**This permitting action is similar to the 8/14/95 licensing action in that it is:**

1. Carrying forward the technology based monthly average and daily maximum concentration limits for biochemical oxygen demand (BOD), and for total suspended solids (TSS);
2. Carrying forward the water quality based monthly average and daily maximum concentration limits for Escherichia coliform (E. coli) bacteria;
3. Carrying forward the technology based daily maximum concentration limits for settleable solids; and,
4. Carrying forward the authorization to discharge to the receiving waters on a year-round basis.

**PERMIT SUMMARY (Cont'd)**

**This permitting action is different from the 8/14/95 licensing action in that it is:**

1. Increasing the flow discharge limitation from 15,000 to 25,000 gallons per day (to address the expansion needs of the school) in accordance with the provisions of Department Regulations Chapter 596(6)(B)(1)(b);
2. Establishing a technology based weekly average concentration limitation for BOD and TSS based on secondary treatment standards of Department Regulations Chapter 525 (3) (III) (a/b) (1 & 2);
3. Establishing a technology based monthly average, weekly average, and daily maximum BOD and TSS mass limitations based on the previously established flow and concentrations limitations so that the mass loading is not increased above the previously existing levels (maintaining the previously existing mass limitation is necessary because of the receiving water quality attainment status and to not cause or contribute to a degradation of the receiving water quality);
4. Establishing a requirement to achieve a minimum 30-day average of 85 percent removal for BOD and TSS;
5. Establishing a monitoring provision for phosphorus concentrations and mass in the effluent as a reporting requirement;
6. Revising the pH range limitation from 6.0 – 8.5 to 6.0 – 9.0 standard units;
7. Eliminating the technology based monthly average concentration limitation of 0.1 ml/L for settleable solids;
8. Modifying the Total Residual Chlorine (TRC) limitations based on ambient water quality in the receiving water during the seasonal disinfection season (May 15<sup>th</sup> through September 30<sup>th</sup> of each year).
9. Requiring the submission of a revised Operation and Maintenance (O&M) plan, and a Wet Weather Management Plan, for Department review and comment;
10. Requiring the submittal of an evaluation for the elimination of the discharge to surface waters with any subsequent application for renewal or transfer of the permit to supplement any existing assessment.
11. Revising the minimum monitoring frequency for all parameters based on the new increased flow limitations based upon Department monitoring guidelines.

## CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated January 13, 2006, and subject to the Conditions listed below, the Department makes the following CONCLUSIONS:

1. The discharge, either by itself or in combination with other discharges, will not lower the quality of any classified body of water below such classification.
2. The discharge, either by itself or in combination with other discharges, will not lower the quality of any unclassified body of water below the classification which the Department expects to adopt in accordance with state law.
3. The provisions of the State's antidegradation policy, 38 MRSA Section 464(4)(F), will be met, in that:
  - (a) Existing in-stream water uses and the level of water quality necessary to protect and maintain those existing uses will be maintained and protected;
  - (b) Where high quality waters of the State constitute an outstanding national resource, that water quality will be maintained and protected;
  - (c) The standards of classification of the receiving water body are met or, where the standards of classification of the receiving water body are not met, the discharge will not cause or contribute to the failure of the water body to meet the standards of classification;
  - (d) Where the actual quality of any classified receiving water body exceeds the minimum standards of the next highest classification, that higher water quality will be maintained and protected; and
  - (e) Where a discharge will result in lowering the existing quality of any water body, the Department has made the finding, following opportunity for public participation, that this action is necessary to achieve important economic or social benefits to the State.
4. The discharges will be subject to effluent limitations that require application of best practicable treatment (BPT) as defined in Maine law, 38 M.R.S.A., §414-A(1)(D).
5. The overboard discharge system was in continuing existence for the 12 months preceding June 1, 1987.
6. The Department does not have information indicating that a subsurface wastewater disposal system could be installed in compliance with the Maine Subsurface Waste Water Disposal Rules or alternative method of waste water disposal without the surface water discharge to the Pleasant River at the time the renewal application was accepted by the Department.
7. A publicly owned sewer line is not located on or abutting land owned or controlled by the permittee or is not available for the permittee's use.
8. The discharge is not located within the boundaries of a sanitary district or sewer district.

**ACTION**

THEREFORE, the Department APPROVES the above noted application of the WINDHAM SCHOOL DISTRICT, to discharge up to 25,000 gallons per day of secondary treated wastewater to the Pleasant River, Class B, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations:

1. "Maine Pollutant Discharge Elimination System Permit Standard Conditions Applicable to all Permits," revised July 1, 2002, copy attached.
2. The attached Special Conditions, including any effluent limitations and monitoring requirements.
3. This permit expires five (5) years from the date of signature below.

DONE AND DATED AT AUGUSTA, MAINE, THIS 10<sup>TH</sup> DAY OF March 2006.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: 

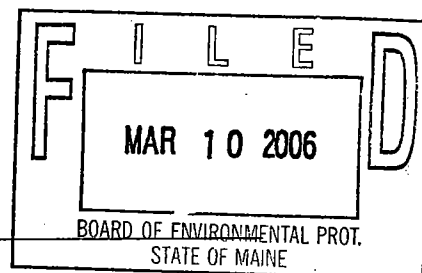
David P Littell, Acting Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: December 12, 2005

Date of application acceptance: December 13, 2005

Date filed with Board of Environmental Protection \_\_\_\_\_



This Order prepared by DAVID SILVER, BUREAU OF LAND & WATER QUALITY  
W002510 09MAR06

**SPECIAL CONDITIONS****A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

During the period beginning the effective date of this permit and lasting through permit expiration, the permittee is authorized to discharge secondary treated sanitary wastewater from Outfall #001 to the Pleasant River. Such discharges shall be limited and monitored by the permittee as specified below<sup>(1)</sup>.

Effluent Characteristic	Discharge Limitations (as specified)					Minimum Monitoring Requirements (as specified)		
	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type
Flow [50050]	25,000 GPD [07]	--	Report, GPD [07]	--	--	--	Continuous [9999]	Metered [MT]
BOD <sub>5</sub> [00310]	3.7 lbs./day [26]	5.6 lbs./day [26]	6.3 lbs./day [26]	30 mg/L [19]	45 mg/L [19]	50 mg/L [19]	2/Monthly [0230]	8-Hour Composite <sup>(2)</sup> [08]
BOD <sub>5</sub> Percent Removal <sup>(3)</sup> [81010]	---	---	---	85% [23]	---	---	1/Month [0130]	Calculate [CA]
TSS [00530]	3.7 lbs./day [26]	5.6 lbs./day [26]	6.3 lbs./day [26]	30 mg/L [19]	45 mg/L [19]	50 mg/L [19]	2/Monthly [0230]	8-Hour Composite <sup>(2)</sup> [08]
TSS Percent Removal <sup>(3)</sup> [81011]	---	---	---	85% [23]	---	---	1/Month [0130]	Calculate [CA]
Total Phosphorus <i>June 1<sup>st</sup> - Sept 30<sup>th</sup></i> [00665]	Report, lbs./day [26]	---	Report, lbs./day [26]	Report, mg/L [19]		Report, mg/L [19]	2/Monthly [0230]	8-Hour Composite <sup>(2)</sup> [08]
Ortho-Phosphorus <i>June 1<sup>st</sup> - Sept 30<sup>th</sup></i> [70507]	Report, lbs./day [26]	---	Report, lbs./day [26]	Report, mg/L [19]		Report, mg/L [19]	2/Monthly [0230]	8-Hour Composite <sup>(2)</sup> [08]
Settleable Solids [00545]	--	--	--	--	--	0.3 ml/L [25]	5/Week [0507]	Grab [GR]
E. Coli Bacteria <sup>(4)</sup> <i>May 15<sup>th</sup> - Sept 30<sup>th</sup></i> [31633]	--	--	--	64/100 ml <sup>(5)</sup> [13]	--	427/100 ml [13]	2/Month [0230]	Grab [GR]
Total Residual Chlorine <sup>(6)</sup> [50060]	--	--	--	0.95 mg/L [19]	--	1.0 mg/L [19]	5/Week [0507]	Grab [GR]
pH [00400]	--	--	--	--	--	6.0 - 9.0 SU [12]	5/Week [0507]	Grab [GR]

*The italicized numeric values bracketed in the table and in subsequent text are code numbers that Department personnel utilize to code the monthly Discharge Monitoring Reports.*

Note: The permittee shall monitor and report Outfall #001 parameters during the initial 18 months of operation under this permit. After the initial 18 months, the permittee may request (to the Department in writing) modification of the measurement frequency based upon satisfactory performance of the system. The Department may modify the measurement frequency, if warranted, based on the data from the operation of the system.

**FOOTNOTES:** See Page 6 of this permit for applicable footnotes.

**SPECIAL CONDITIONS**

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)**

FOOTNOTES:

1. **Influent and Effluent Monitoring** – Influent monitoring shall be conducted at the effluent side of the influent screen. Effluent monitoring shall be conducted at a location following the last treatment unit in the treatment process as to be representative of end-of-pipe effluent characteristics. The Department has determined that the discharge line sampling port (located after the introduction of disinfection liquid) is the appropriate and representative location from which to collect effluent samples on a year-round basis.

Any change in sampling location must be approved by the Department in writing. Sampling and analysis must be conducted in accordance with: a) methods approved by 40 Code of Federal Regulations (CFR) Part 136; b) alternative methods approved by the Department in accordance with the procedures in 40 CFR Part 136; or c) as otherwise specified by the Department. Samples that are sent out for analysis shall be analyzed by a laboratory certified by the State of Maine's Department of Human Services.

2. **BOD<sub>5</sub> and TSS Sample Type** – Eight-hour composite samples for BOD<sub>5</sub> and TSS shall consist of a minimum of four flow-proportioned grab samples collected at equally spaced intervals over an eight-hour period which are combined prior to analysis. Other composite aliquots may be acceptable with written Department approval.
3. **Percent Removal** – The treatment facility shall maintain a minimum of 85 percent removal of both BOD<sub>5</sub> and TSS for all flows receiving secondary treatment. The percent removal shall be calculated based on influent and effluent concentration values. The percent removal shall be waived when the monthly average influent concentration is less than 200 mg/L, and the permittee shall report "NODI-9" for this parameter on the monthly Discharge Monitoring Report (DMR).
4. **Bacteria Limits** – *Escherichia coliform* (*E. coli*) bacteria limits and monitoring requirements are in effect on a seasonal basis (May 15<sup>th</sup> to September 30<sup>th</sup>). The Department reserves the right to require disinfection on a year-round basis to protect the health, safety and welfare of the public.
5. **Bacteria Reporting** – The monthly average *E. coli* bacteria limitation is a geometric mean limitation and sample results shall be reported as such.
6. **TRC Monitoring** – Monitoring for TRC is required when elemental chlorine or chlorine-based compounds are in use for effluent disinfection. For instances when a facility has not disinfected with chlorine-based compounds for an entire reporting period, the facility shall report "NODI-9" for this parameter on the monthly DMR.



## **SPECIAL CONDITIONS**

### **B. ANNUAL DISCHARGE FEES**

Pursuant to Maine law, 38 M.R.S.A. §353-B, the permittee is required to pay an applicable annual fee for discharges authorized by this permit. Failure to pay an annual fee within 30 days of the anniversary date of a license/permit is sufficient grounds for revocation of the license/permit or privilege under Maine law, 38 M.R.S.A. §341-D, subsection 3.

### **C. NARRATIVE EFFLUENT LIMITATIONS**

1. The effluent shall not contain a visible oil sheen, foam or floating solids at any time which would impair the usages designated by the classification of the receiving waters.
2. The effluent shall not contain materials in concentrations or combinations which are hazardous or toxic to aquatic life, or which would impair the usages designated by the classification of the receiving waters.
3. The discharge shall not cause visible discoloration or turbidity in the receiving waters which would impair the usages designated by the classification of the receiving waters.
4. Notwithstanding specific conditions of this permit the effluent must not lower the quality of any classified body of water below such classification, or lower the existing quality of any body of water if the existing quality is higher than the classification.

### **D. DISINFECTION**

If chlorination is used as a means of disinfection, an approved chlorine contact tank providing the proper detention time consistent with good engineering practice must be utilized, followed by a dechlorination system if the total residual chlorine (TRC) cannot be met by dissipation in the detention tank. The TRC in the effluent shall at no time cause any demonstrable harm to aquatic life in the receiving waters. The dose of chlorine applied shall be sufficient to leave a TRC concentration that will effectively reduce bacteria to levels below those specified in Special Condition A, *"Effluent Limitations and Monitoring Requirements"*.

### **E. TREATMENT PLANT OPERATOR**

The treatment facility must be operated by a person holding a minimum of a **Grade II** certificate or registered Maine Professional Engineer pursuant to Title 32 M.R.S.A., Section 4171 et seq. All proposed contracts for facility operation by any person must be approved by the Department before the permittee may engage the services of the contract operator.

## **SPECIAL CONDITIONS**

### **F. MONITORING AND REPORTING**

Monitoring results shall be summarized for each calendar quarter and reported on separate Discharge Monitoring Report Forms provide by the Department and **postmarked on or before the thirteenth (13<sup>th</sup>) day of the month or hand-delivered to a Department Regional Office such that the DMR's are received by the Department on or before the fifteenth (15<sup>th</sup>) day of the month** following the completed reporting period. A signed copy of the Discharge Monitoring Report and all other reports required herein, unless otherwise specified, shall be submitted to the Department assigned compliance inspector at the following address:

Maine Department of Environmental Protection  
Division of Water Quality Management  
Southern Maine Regional Office  
Bureau of Land & Water Quality  
312 Canco Road  
Portland, ME. 04103

### **G. NOTIFICATION REQUIREMENT**

In accordance with Standard Condition D, the permittee shall notify the Department of any substantial change in the volume or character of pollutants being introduced into the wastewater collection and treatment system by a source introducing pollutants into the system at the time of permit issuance. For the purposes of this section, notice regarding substantial change shall include information on (a) the quality and quantity of wastewater introduced into the wastewater collection and treatment system, and (b) any anticipated impact caused by the change in the quality or quantity of the wastewater to be discharged from the treatment system.

### **H. UNAUTHORIZED DISCHARGES**

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from the existing treatment plant Outfall #001. Discharges of wastewater from any other point source are not authorized under this permit, but shall be reported in accordance with Standard Condition B(5)(*Bypass*) of this permit.

### **I. CONNECTION TO MUNICIPAL SEWER**

All wastewaters designated by the Department as treatable in a municipal treatment system will be cosigned to that system within 180 days of the system becoming available, unless this time is extended by the Department in writing.

## **SPECIAL CONDITIONS**

### **J. SITE EVALUATION FOR TRANSFERRED AND RENEWED PERMITS**

**Prior to permit transfer or transfer of the property** occupying the permitted overboard discharge system **or renewal of this permit**, a site evaluation must be performed by a licensed site evaluator, professional engineer, or other qualified professional with experience in designing appropriate waste water disposal systems for the replacement or removal of overboard discharge systems (i.e., for the removal of the surface water discharge, with a land application-spray irrigation, subsurface system, drip irrigation, or other mechanism, etc.). The Department may not grant approval for permit transfer or renewal if the site evaluation concludes that a non-discharging wastewater disposal system designed in compliance with the Maine Subsurface Waste Water Disposal Rules administered by the Maine Department of Health and Human Services, Division of Health Engineering can be installed as a replacement system for the overboard discharge.

### **K. OPERATION & MAINTENANCE (O&M) PLAN**

This facility shall have a current written comprehensive Operation & Maintenance (O&M) Plan. The plan shall provide a systematic approach by which the permittee shall at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit.

**By December 31 of each year, or within 90 days of any process changes or minor equipment upgrades**, the permittee shall evaluate and modify the O&M Plan including site plan(s) and schematic(s) for the waste water treatment facility to ensure that it is up-to-date. The O&M Plan shall be kept on-site at all times and made available to Department and EPA personnel upon request.

**Within 90 days of completion of new and or substantial upgrades of the waste water treatment facility**, the permittee shall submit the updated O&M Plan to their Department inspector for review and comment.

#### **L. WET WEATHER FLOW MANAGEMENT PLAN**

The treatment facility staff shall develop and maintain a Wet Weather Management Plan to direct the staff on how to operate the facility effectively during periods of high flow. The Department acknowledges that the existing collection system may deliver flows in excess of the monthly average design capacity of the treatment plant during periods of high infiltration and rainfall.

**On or before June 1, 2006**, the permittee shall submit to the Department for review and comment, a new or revised Wet Weather Management Plan [*PCS Code 06799*] that conforms to Department guidelines for such plans. The revised plan shall include operating procedures for a range of intensities, address solids handling procedures (including septic waste and other high strength wastes if applicable) and provide written operating and maintenance procedures during the events.

**The permittee shall review the plan at least annually and record any necessary changes to keep the plan up to date. Any changes to the plans must be submitted to the Department for review and approval.**

#### **M. REOPENING OF PERMIT FOR MODIFICATIONS**

Upon evaluation of the tests results or monitoring requirements specified in Special Conditions of this permitting action, new site specific information, or any other pertinent test results or information obtained during the term of this permit, the Department may, at any time and with notice to the permittee, modify this permit to: (1) include effluent limits necessary to control specific pollutants or whole effluent toxicity where there is a reasonable potential that the effluent may cause water quality criteria to be exceeded; (2) require additional effluent or ambient water quality monitoring if results on file are inconclusive; or (3) change monitoring requirements or limitations based on new information.

#### **N. SEVERABILITY**

In the event that any provision, or part thereof, of this permit is declared to be unlawful by a reviewing court, the remainder of the permit shall remain in full force and effect, and shall be construed and enforced in all respects as if such unlawful provision, or part thereof, had been omitted, unless otherwise ordered by the court.

**MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT  
AND  
MAINE WASTE DISCHARGE LICENSE**

**FACT SHEET**

Date: January 13, 2006

PERMIT NUMBER: **ME0102751**  
LICENSE NUMBER: **W002510-5D-C-R**

NAME AND ADDRESS OF APPLICANT:

**Windham School Department  
228 Windham Center Road  
Windham, Maine 04062**

COUNTY: **Cumberland County**

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

**Windham School Department  
228 Windham Center Road  
Windham, Maine 04062**

RECEIVING WATER/CLASSIFICATION: **Pleasant River/Class B**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **Mr. Donn Davis,  
Assistant Superintendent  
(207) 892-1800**

**1. APPLICATION SUMMARY**

The applicant has applied for a renewal of Waste Discharge License (WDL) #W002510-ZC-B-R, which was issued on August 14, 1995 and expired on August 14, 2005. The WDL approved the discharge of up to a monthly average flow of 15,000 (0.015 million) gallons per day (GPD) of secondary treated waste water from a school waste water treatment facility, to the Pleasant River, Class B, in Windham, Maine. The applicant now requests an increase of the monthly average flow limit to 25,000 GPD.

**2. PERMIT SUMMARY**

- A. Regulatory: On January 12, 2001, the Department received authorization from the U.S. Environmental Protection Agency (EPA) to administer the National Pollutant Discharge Elimination System (NPDES) permit program in Maine. From that point forward, the program has been referred to as the Maine Pollutant Discharge Elimination System (MEPDES) permit program and permit #ME0102751 will be utilized as the primary reference number.

B. History: The most recent licensing/permitting actions include the following:

March 12, 1975 – The Department issued Waste Discharge License (WDL) #677 that authorized the discharge of up to 55,375 gallons per day (gpd) of treated sanitary wastewater from the school complex to the Pleasant River. WDL #677 had an expiration date of March 12, 1978.

November 14, 1978 – The Department issued a renewal license to the school for the discharge of up to 55,375 gpd with a WDL number of #2510 and a term of five years.

May 24, 1984– The Department issued WDL #W002510-45-A-R, a renewal of the WDL issued in 1978 with a term of five years.

August 14, 1995 – The Department issued a renewal to the 1984 WDL with a license number of #W002510-ZC-B-R with an authorized flow limitation of 15,000 gpd and a term of ten (10) years. The August 14, 1995 WDL expired on August 14, 2005.

May 14, 2002 – The Department issued Site Location of Development permit that approved the construction of expansions to the existing school complex including a 122,000 square foot addition to the existing high school building, an 800-seat auditorium, tennis courts, upgrades to the existing sewage treatment plant and other ancillary improvements. The Department found that the resulting complex would accommodate 1,150 students in the existing elementary, junior high, and expanded high school. The Department found that the expanded school complex is located on a 110 acre site and the cost of the expansion was \$35 million.

C. Source Description: The facility receives sanitary waste water from an elementary, junior high, and high school complex that serves approximately 1,150 students and an additional number of school staff. The majority of the site is developed either with school buildings, parking areas, or athletic fields. The schools are served by the Portland Water District providing potable water and water for irrigation and fire protection.

D. Waste Water Treatment: An existing oxidation ditch secondary treatment system was upgraded in 2002 and resulted in enhanced waste water treatment. All waste water flows from the different sources on the school campus to the waste water treatment facility by gravity sewer lines. The facility treats waste water by first measuring and conveying the flow past a flow recorder and ultrasonic flow meter, then to an influent screen where large solids are physically removed. The waste water is then directed to the oxidation ditch where it is aerated within an oval shaped channel that is 12 feet wide and 3 feet deep with a footprint of 80 feet long and 36 feet wide (volume =36,800 gallons). The waste water is then directed to a mixed liquor transfer tank and then to a clarifier with an 11 foot depth and a capacity of 21,000 gallons. The treated, clarified waste water is then directed past a disinfection feed line (where sodium hypochlorite is added to the waste stream to disinfect the waste water) and then is conveyed to the Pleasant River by an outfall pipe that has a single port orifice near the center of the river bottom. File information indicates that the outfall pipe discharges from the river bottom to achieve rapid and complete mixing. Since water is supplied from off-site utilities and waste water flows via gravity to the treatment plant, emergency back-up power is required under standard conditions (E) attached to all permits to provide the ability of the treatment plant to treat waste water generated during power failures and conveyed to the treatment facility.

### 3. CONDITIONS OF PERMIT

Maine law, 38 M.R.S.A. Section 414-A, requires that the effluent limitations prescribed for discharges, including, but not limited to, effluent toxicity, require application of best practicable treatment (BPT), be consistent with the U.S. Clean Water Act, and ensure that the receiving waters attain the State water quality standards as described in Maine's Surface Water Classification System. In addition, 38 M.R.S.A., Section 420 and Department rule 06-096 CMR Chapter 530, *Surface Water Toxics Control Program*, require the regulation of toxic substances not to exceed levels set forth in Department rule 06-096 CMR Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants*, and that ensure safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected.

### 4. RECEIVING WATER QUALITY STANDARDS

Maine law, 38 M.R.S.A. §467(9)(B)(1) classifies the Pleasant River, as a tributary to the Presumpscot River below the outlet of Sebago Lake, which includes the point of discharge, as Class B waters. Maine law, 38 M.R.S.A. §465(3) describes the standards for Class B waters.

### 5. RECEIVING WATER QUALITY CONDITIONS

The State of Maine 2004 Integrated Water Quality Monitoring and Assessment Report, prepared pursuant to Sections 303(d) and 305(b) of the Federal Water Pollution Control Act, lists tributaries of the Presumpscot River (including the Pleasant River) entering below the outlet of Sebago Lake (Waterbody Segment ID# 607R) as, "Category2: Rivers and Streams Attaining Some Designated Uses." "Rivers and Streams Attaining Some Designated Uses" in this context refers to the attainment of standards other than the standards related to dissolved oxygen content in the river and for bacteria standards according to water quality data collected by the Presumpscot River Watch, in a report entitled Water Quality Monitoring Data Report. This permitting action is establishing BOD and TSS mass limits that do not exceed previous licensing levels and has added a requirement for the School to conduct additional monitoring for phosphorus discharges as a potential contributing factor in the attainment status.

### 6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

- a. Flow: The previous licensing action established a discharge flow limitation of 15,000 gpd based on the dry weather design capacity of the treatment system. This permitting action is establishing a monthly average flow limitation of 25,000 gpd to address the expansion needs of the school and is also establishing a daily maximum discharge flow reporting requirement to assist in compliance evaluations and system performance evaluations. This permitting action is specifying that effluent flow shall be measured continuously to ensure that representative discharge flow data are obtained to be consistent with Department guidelines for discharges between 20,000 and 49,999 gpd.

## 6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (Cont'd)

- b) Dilution Factors - In accordance with Department Regulation Chapter 530, *Surface Water Toxics Control Program*, the Department has determined that the following dilution factors are applicable for the Windham School District. With a permitted flow of 25,000 gpd (0.025 MGD), the dilution factors can be calculated:

$$\text{Dilution Factor} = \frac{(\text{River Flow in cfs})(\text{Conversion Factor}) + \text{Plant Flow in MGD}}{\text{Plant Flow in MGD}}$$

$$\text{Acute: 1Q10} = 2.8 \text{ cfs} \Rightarrow \frac{(2.8 \text{ cfs})(0.6464) + 0.025 \text{ MGD}}{0.025 \text{ MGD}} = 74 : 1$$

$$\text{Chronic: 7Q10} = 3.3 \text{ cfs} \Rightarrow \frac{(3.3 \text{ cfs})(0.6464) + 0.025 \text{ MGD}}{0.025 \text{ MGD}} = 87 : 1$$

$$\text{Harmonic Mean} = 9.9 \text{ cfs} \Rightarrow \frac{(9.9 \text{ cfs})(0.6464) + 0.025 \text{ MGD}}{0.025 \text{ MGD}} = 259 : 1$$

Footnote: The harmonic mean dilution factor is approximated by multiplying the chronic dilution factor by three (3). This multiplying factor is based on guidelines for estimation of human health dilution presented in the U.S. EPA publication, *Technical Support Document for Water Quality-Based Toxics Control* (Office of Water; EPA/505/2-90-001, page 88), and represents an estimation of harmonic mean flow on which human health dilutions are based in a riverine 7Q10 flow situation. The acute 1Q10 has not been quantified at this time due to a lack of empirical data, therefore the default (0.85) of the 7Q10 is used.

Therefore, dilution factors associated with the discharge from the School are as follows:

Acute: 74 : 1      Chronic: 87 : 1      Harmonic Mean: 259 : 1



## 6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (Cont'd)

- c) BOD5 & TSS - The monthly average and daily maximum biochemical oxygen demand (BOD5) and total suspended solids (TSS) concentration limits of 30 mg/L and 50 mg/L respectively from the previous licensing action, were based on secondary treatment requirements of the Clean Water Act of 1977 §301(b)(1)(B) as defined in 40 CFR 133.102 and Department Rule Chapter 525(3)(III) and are being carried forward in this permitting action. This permitting action is also establishing a weekly average concentration for BOD and TSS of 45 mg/L from Department Rule Chapter 525.

This permitting action is establishing BOD and TSS monthly average, weekly average, and daily maximum mass limitations based on the previously licensed flow of 15,000 gpd (0.015 MGD) and the concentration limits outlined above in order to limit mass loading to the river to pre-existing levels. Monitoring frequency for BOD and TSS mass and concentrations from the previous licensing action are being modified from once monthly to twice monthly to reflect current Department guidelines for treatment facilities that discharge more than 20,000 gpd but less than a value of 49,999 gpd. BOD and TSS effluent percent removal calculations to demonstrate a minimum of 85% removal from influent values are required pursuant to Department Rule Chapter 525(3)(III)(a)(3) and are established in this permitting action at a frequency of once per month.

Monthly Average Mass Limit:  $(30 \text{ mg/L})(8.34 \text{ lbs./gallon})(0.015 \text{ MGD}) = 3.7 \text{ lbs./day}$

Weekly Average Mass Limit:  $(45 \text{ mg/L})(8.34 \text{ lbs./day})(0.015 \text{ MGD}) = 5.6 \text{ lbs./day}$

Daily Maximum Mass Limit:  $(50 \text{ mg/L})(8.34 \text{ lbs./day})(0.015 \text{ MGD}) = 6.2 \text{ lbs./day}$

The previous licensing action established a monitoring parameter sample type of "Grab" for BOD and TSS. This permitting action is modifying the sample type to ensure representative sampling, that results are comparable with results from other sanitary wastewater treatment facilities, and for consistency with Department guidance for overboard discharge facilities licensed to discharge between 20,000 and 49,999 GPD. Composite samples shall consist of a minimum of four flow-proportioned grab samples collected at equally spaced internals over an eight-hour period which are combined prior to analysis.

- d) Settleable Solids: The previous licensing action established monthly average and daily maximum technology-based concentration limits of 0.1 ml/L and 0.3 ml/L, respectively, for settleable solids. The Department has since reconsidered the limits for settleable solids and has concluded that a daily maximum concentration limit of 0.3 ml/L provides sufficient information to assess whether the treatment facility is providing BPT. Therefore, this permitting action is eliminating the monthly average concentration limit of 0.1 ml/L and is carrying forward the daily maximum limit of 0.3 ml/L. This permitting action is modifying the minimum monitoring frequency requirement for settleable solids from twice per week to five samples per week (5/Week) to be consistent with similar types of facilities in accordance with Department guidelines for facilities with a flow limitation of greater than 20,000 and less than 49,999 gallons per day.

## 6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

- e) E. Coli Bacteria - The previous licensing action established a monthly average and daily maximum concentration limit of 64 colonies per 100 ml and 427 colonies per 100 ml, respectively. In this permitting action, the Department is carrying forward these concentration limits in accordance with 38 M.R.S.A. §465(3)(B) on a seasonal basis between May 15<sup>th</sup> and September 30<sup>th</sup> of each year. The Department reserves the right, at any time, to require year-round disinfection to protect the health, safety and welfare of the public. This permitting action is modifying the minimum monitoring frequency from the previous licensing action of once per month (1/Month) to a minimum monitoring frequency of two times per month (2/Month) to be consistent with Department guidelines for those facilities that discharge more than 20,000 gpd but less than 49,999 gpd.
- f) Total Residual Chlorine (TRC): The previous licensing action established a technology-based daily maximum concentration limit of 1.0 mg/L for TRC. Limitations on TRC are specified to ensure that ambient water quality standards are maintained and that BPT technology is being applied to the discharge. Department permitting actions impose the more stringent of either a water quality-based or BPT-based limit. With dilution factors as determined in Section 6(b) of this Fact Sheet, end-of-pipe (EOP) water quality-based concentration thresholds for TRC may be calculated as follows:

			Calculated	
Acute (A)	Chronic (C)	A / C	Acute	Chronic
<u>Criterion</u>	<u>Criterion</u>	<u>Dilution Factors</u>	<u>Threshold</u>	<u>Threshold</u>
0.019 mg/L	0.0011 mg/L	74 : 1 (A) / 87 : 1 (C)	1.4 mg/L	0.95 mg/L

The Department has established a daily maximum BPT limitation of 1.0 mg/L for facilities that disinfect their effluent with elemental chlorine or chlorine-based compounds. For facilities that dechlorinate the discharge in order to meet water quality based thresholds, the Department has established daily maximum and monthly average BPT limits of 0.3 mg/L and 0.1 mg/L, respectively. The School currently does not dechlorinate the effluent prior to discharge.

The calculated acute and chronic water quality-based thresholds are 1.4 mg/L and 0.95 mg/L, respectively. The chronic water quality based threshold of 0.95 mg/L is more stringent than the technology-based standards and therefore the water quality based limit of 0.95 mg/L is being established as a monthly average limit and 1.0 mg/L is being established as a daily maximum limit in this permitting action. This permitting action is modifying the minimum monitoring frequency from the previous licensing action of three times per week (3/Week) to five times per week (5/Week) based on Department guidance for overboard discharge facilities licensed to discharge between 20,000 and 49,999 GPD.

TRC monitoring is required any time chlorine-based compounds are in use for effluent disinfection. For instances when the permittee has not utilized chlorine-based compounds for effluent disinfection for an entire reporting period, the permittee shall report "NODI-9" for this parameter on the monthly discharge monitoring report (DMR).

## 6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

g) pH: The previous licensing action established a pH range limit of 6.0 – 8.5 standard units (SU), considered by the Department at the time as BPT for secondary treated wastewater and a minimum monitoring frequency requirement of once per day. Pursuant to a Department rule found at Chapter 525(3)(III)(c), the pH range limitation is being revised to 6.0 – 9.0 SU, which is now considered BPT for secondary treated wastewater. This permitting action is establishing a minimum monitoring frequency requirement of once per week (1/Week) consistent with Department guidelines for facilities that discharge between 20,000 and 49,999 gpd.

h) Whole Effluent Toxicity (WET) & Chemical Specific Testing: Maine law, 38 M.R.S.A., Sections 414-A and 420, prohibit the discharge of effluents containing substances in amounts that would cause the surface waters of the State to contain toxic substances above levels set forth in Federal Water Quality Criteria as established by the USEPA. Department rule, 06-096 CMR Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants*, set forth ambient water quality criteria (AWQC) for toxic pollutants and procedures necessary to control levels of toxic pollutants in surface waters.

Chapter 584 provides criteria for exemption of certain municipal discharges, including, but not limited to, discharges from publicly owned treatment works which are not classified by USEPA as major and which discharge to receiving waters with a dilution ratio of at least 50:1, and with a discharge flow of less than 50,000 gpd, provided that the POTW receives no process wastes from sources for which pretreatment standards have been promulgated by the USEPA, or discharges from residential overboard discharges. This permitting action authorizes the School to discharge a monthly average of up to 25,000 gallons per day into receiving waters with a chronic dilution factor of 87 : 1, therefore, the School qualifies for exemption from toxics testing pursuant to the Department's rules. Thus, this permitting action is not establishing a requirement to conduct WET, priority pollutant or analytical chemistry testing at this time. The Department reserves the right to reopen this permit in accordance with Special Condition N to require said testing if the Department determines that the discharge from the school may cause or have a reasonable potential to cause or contribute to exceedances of narrative or numerical water quality criteria.

i) Total and Ortho Phosphorus: This permitting action establishes a "Report" requirement for phosphorus concentrations in the effluent discharged by the permittee. The Department has found in the past that phosphorus additions generally increase the trophic state of receiving waters in Maine. The permittee discharges effluent to the Pleasant River. An increase in the trophic state of the Pleasant River may increase the probability of an algal bloom occurring or decrease in the dissolved oxygen content and cause or contribute to the non-attainment of its water classification. This permitting action is establishing a seasonal (June 1<sup>st</sup> to September 30<sup>th</sup>) twice monthly (2/Month) requirement to monitor phosphorus in the discharge effluent.

## **7. DISCHARGE IMPACT ON RECEIVING WATER QUALITY**

As permitted, the Department has determined the existing water uses will be maintained and protected, and that the discharge as permitted will not cause or contribute to the failure of the water body to meet standards for Class B waters.

## **8. PUBLIC COMMENTS**

Public notice of this application was made in a newspaper with a circulation in the vicinity of the facility on or about December 12, 2005. The Department receives public comments on an application until the date a final agency action is taken on the application. Those persons receiving copies of draft permits shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to Chapter 522 of the Department's rules.

## **9. DEPARTMENT CONTACTS**

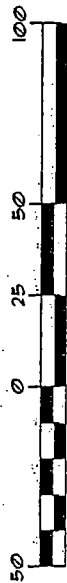
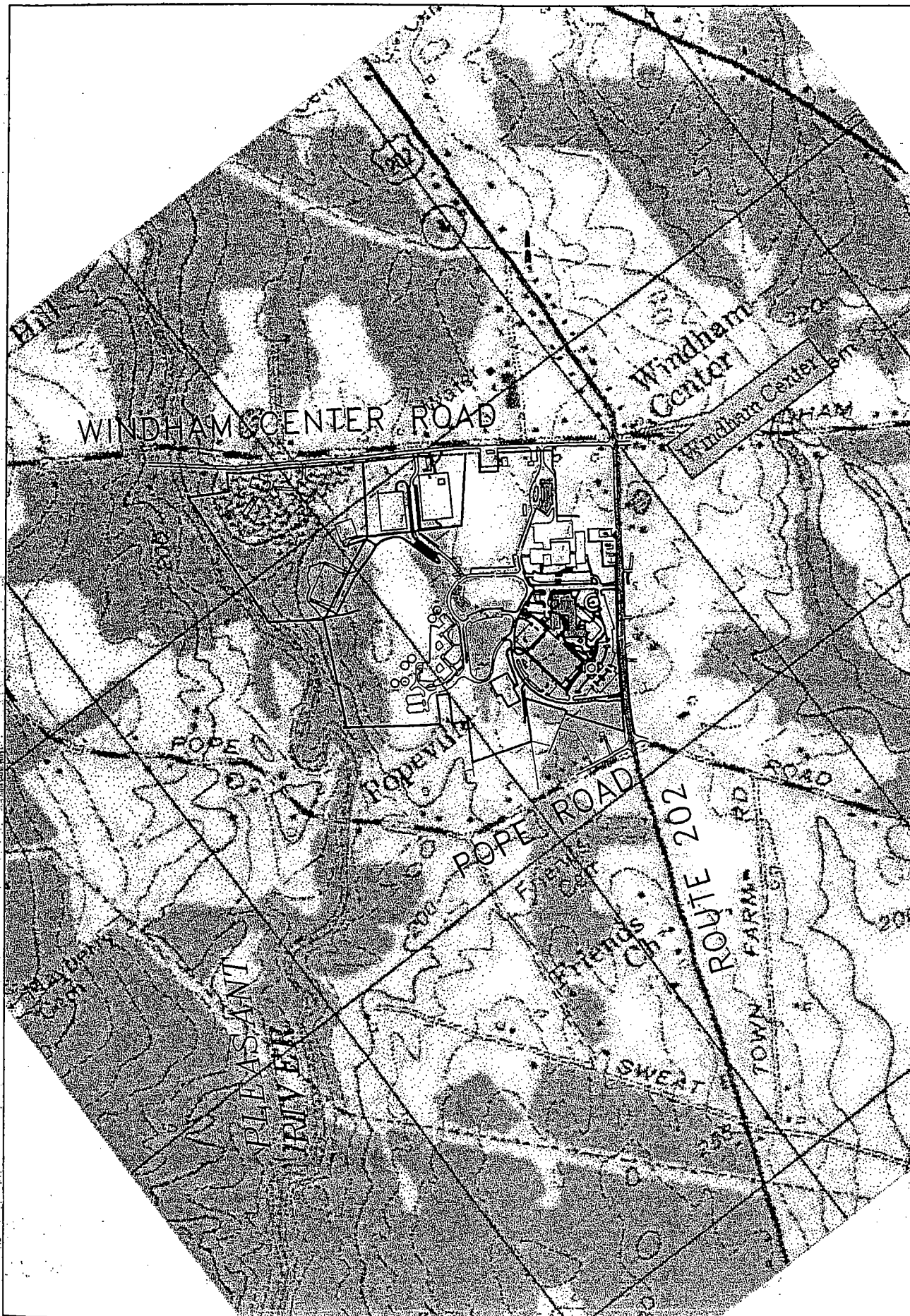
Additional information concerning this permitting action may be obtained from, and written comments sent to:

David Silver  
Division of Water Resource Regulation  
Bureau of Land & Water Quality  
Department of Environmental Protection  
17 State House Station  
Augusta, Maine 04333-0017      Telephone: (207) 287-7658

## **10. RESPONSE TO COMMENTS**

During the period of December 13, 2005 through final action on the application, the Department accepted comments on the proposed draft MEPDES permit/WDL to be issued to the Windham School District. During the comment period, the Department did not receive significant substantial comments on the application, therefore a Response to Comment Section has not been prepared as part of this permitting action.



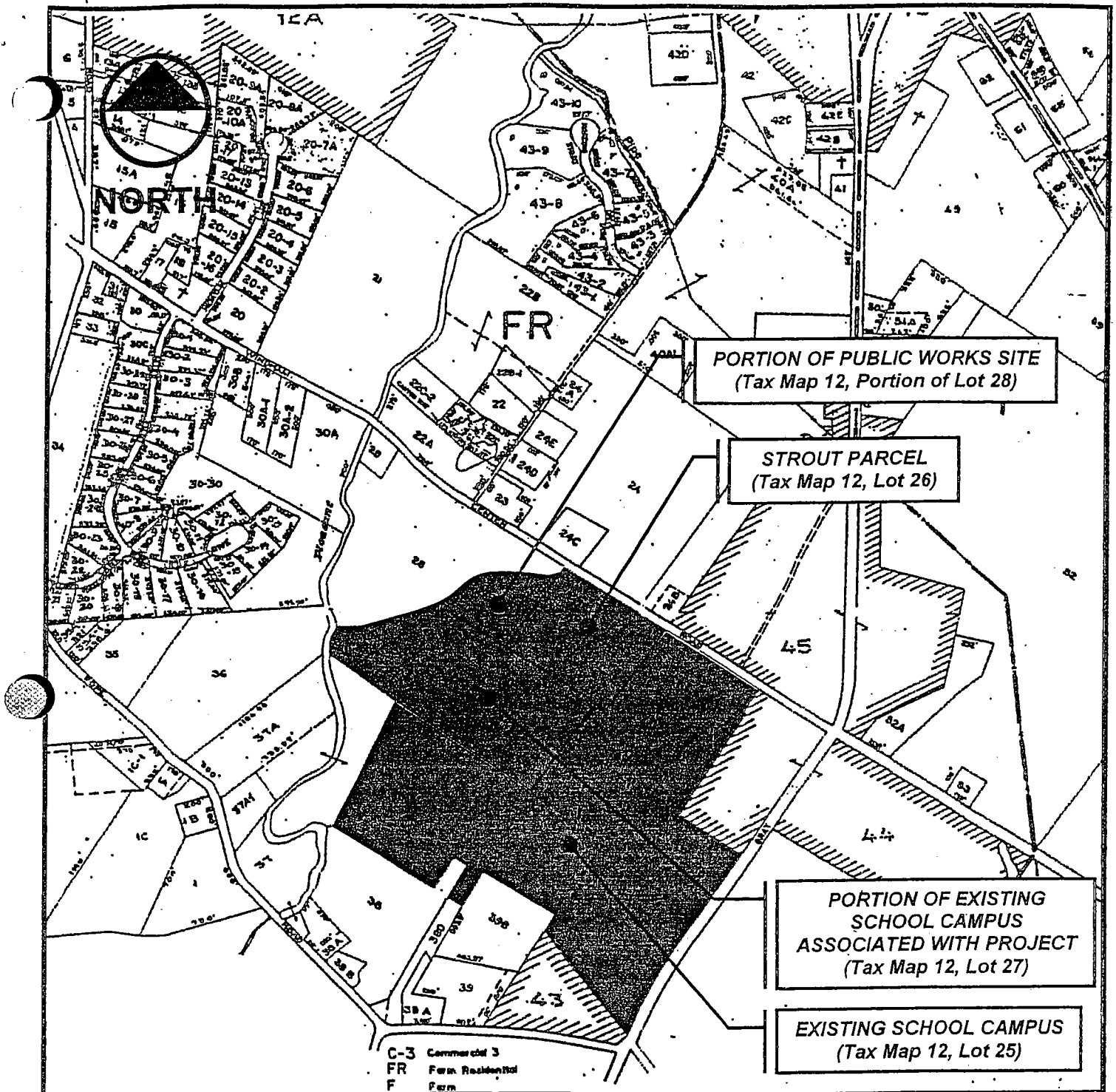


# LOCATION PLAN

DATE: DECEMBER 14 20, 2001

PROJECT: 00401

WINDHAM SCHOOL DEPARTMENT, WINDHAM, MAINE  
 ADDITIONS & RENOVATIONS TO:  
 WINDHAM HIGH SCHOOL  
 WINDHAM, CUMBERLAND COUNTY, MAINE



## TAX MAP

### Windham Recreational Fields - North Windham, Maine

SOURCE: PROPERTY TAX MAP, TOWN OF WINDHAM, CUMBERLAND COUNTY, MAINE; TAX MAP: 12; LOT NUMBERS: 28 & 26



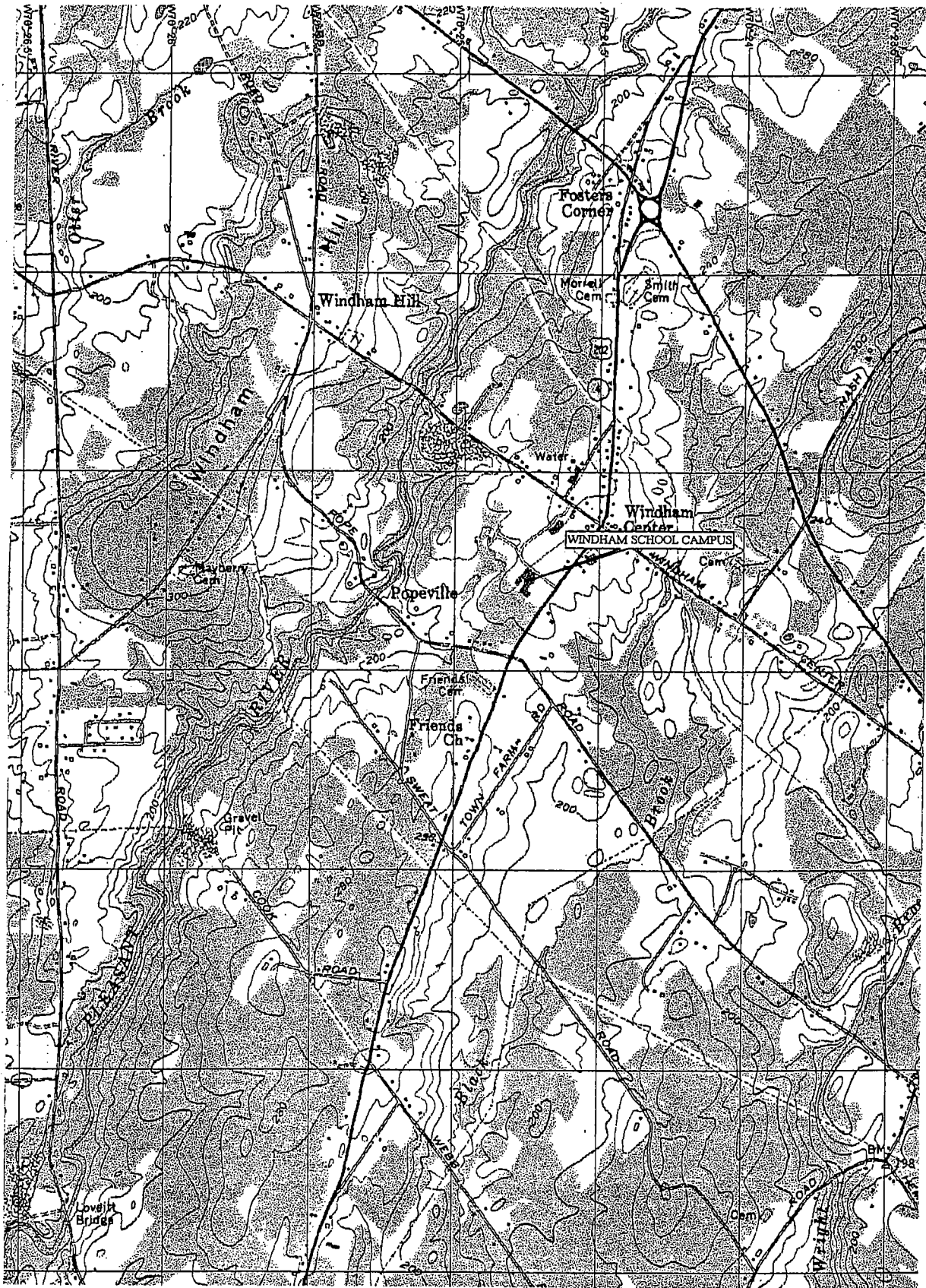
DeLUCA-HOFFMAN ASSOCIATES, INC.  
CONSULTING ENGINEERS  
778 MAIN STREET, SUITE 8  
SOUTH PORTLAND, MAINE 04106  
TEL. 207-775-1121  
FAX 207-879-0896

DESIGNED	WGH	DATE	MAY 2001
DRAWN	JDL	SCALE	N.T.S.
CHECKED	WGH	JOB NO.	2146

FIGURE

3





SCALE 1 : 25000

# USGS LOCATION MAP

DATE: DECEMBER 2001

PROJECT: 00407

WINDHAM SCHOOL DEPARTMENT  
WINDHAM, MAINE  
WINDHAM HIGH SCHOOL  
ADDITIONS & RENOVATIONS



# Windham School--School Union #15



Oxydation  
Ditches

SCHOOL UNION #15

0 25 50 100 150 200  
Feet



**Windham School--School Union #15**

Donn David, SuperIntendent, 892-1800  
 228 Windham Center Road  
 Windham, ME 04062  
 Brian Kinney, Facility Manager  
 Roy Deschaine, Maintenance  
 Ron Taylor, Grade V Operator 967-2244  
 at Kennebunkport POTW  
 Steve Woodard, 774-2112  
 ME0102751  
 WDL #W002510-ZC-C-R

The map displays various land parcels with labels such as "GRAVEL Excessively drained", "SANDY Somewhat excessively drained", "BELGRADE Moderately well drained", "PAXTON Well drained", "BUXTON Somewhat poorly drained", "DEERFIELD Moderately well drained", "SCOTT'S Pond", "HOLLIS Somewhat excessively drained", "BLUETOE Somewhat poor", "BEAUCHE Moderately well drained", "POPE RD", "SCHOOL RD", "Pleasant River", "TREATED OUTFALL Outfall 001", and "Oxydation Ditch". A scale bar indicates distances from 0 to 2,000 feet.

**All areas not shaded and cross hatched are depicted as Non-Hydric Soils, suitable for Spray Irrigation, Drip Irrigation, or Subsurface Waste Water Disposal.**

